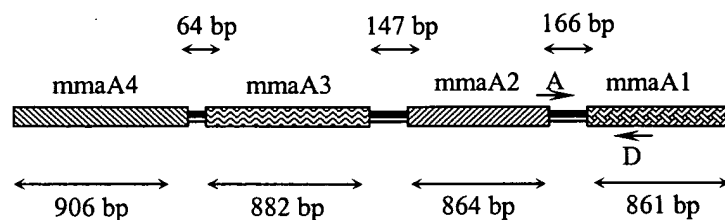




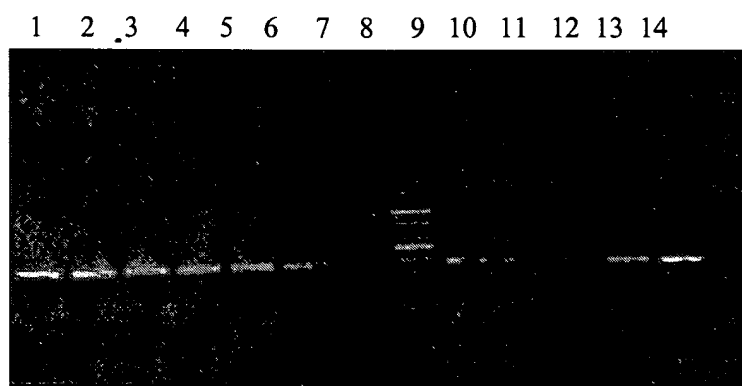
U. S. Patent Application No. 10/725,994  
Attorney Docket No. 041144 F 010



**Fig. 1.** Schematic diagram of methoxy mycolic acid synthase mmaA 4-mmaA 1 gene cluster of mycobacteria and location of forward A, and reverse D primers.

CTACTTCGCCAGCGTGAAC TGGTTGACGTCGATGTAGCCGACCCGGAACAGCTTGGCGCAGCCGGTCA  
GGTATTTTCATGTACCGCTCGTAGACCTCTTCGGACTGGATCGCGATGGCCTCGCTTTTGTGTTCTGCA  
GCGCCTCGGCCCACAGGTCGAGGGTCCTGGCGTAATGCGGCTGCAGCGACTGGCGGCGAGTCAGCGT  
GAAACCCGTCTTCGCCGACTGTTCTCAACCATTTCAATCGTCGGAGGTTGGCCCCCGGGAAGATTTC  
GGTCGCGATGAACTTGAGAAAGCGGGCCAGCCACAACGTGAGCGGCAAGCCGTGGTCGACCATCTGC  
TGCCTGGTCAGGCCGGTGATCGTGTGCAGCAGCAACACGCCATCGGGCGGCAGGATTTTGTGGGCCCCG  
GGCGAAGAAGTCGGCGTGACGATCGTGGCCGAAGTGCTCGAACGCGCCGATCGACACGATGCGGTGCG  
ACGGGCTCGTTGAACTGCTCCCATCCCGCCAGCAACACTCGCCTGTGCGCGGGGTGTCCATCTCGTCG  
AACGACTTCTGCACATGGGCGGCCTGGTTCTTCGACAATGTCAGGCCGACGACGTTGACGTCATACTG  
CGCGATCGCGCGCCGCATGGTGGCGCCCCAGCCGCAACCGATATCGAGCAGCGTCATGCCGGGCTGCA  
GACCTAGCTTGCCCAGCGCCAGGTCGATCTTGGCGATCTGGGCCTCTTCCAGCGTCATGTCCTCGCGTT  
CGAAATGCGCGCAGCTGTAGGTCTGGGTTCGGATCCAGGAACAGCCGGAAGAAGTCGTCGGACAGGTC  
GTAGTGTGCCTGCACGTCCTCGAAGTGCGGCGTTAGGTG*CTTGACCATgagggtgtaatgcctttccggaccctaggtggcct*  
*ttcgtgcttcacggaacgcaccgatgcttccccctcccccatgctcgaggcatgctatccgatacaggccgcccgcactaaaccgcatgaatttcccaggtea*  
*gggaacggatatgagcggacgag*CTACTTGGTCATGGTGAAC TGGGCGACGTTGATTAGGCCTCTGCGGAAGCGCT  
CCGCGCATCCGGTCAGATAGTGCATGAAGTTGTTGTAGACCTCTTCGGACTGTACGGCGATGGCGCGT  
TCGCGGGCAGCCTGTAGGTTGGCGGCCCATGCATC*GAGAGTCCGTGCGTAGTGCT*GCTGCAGCAGCTGG  
ACATGCTCGATGGTGAAGCCCGCGGCCTGCGCATTGTGACAATGTCGGGCTCCGATGGCAGCTCGCC  
GCCCCGGAAGATCGACTCCCGCAGGAATTTGAGGAATCGAAGGTCGCTCATCGTCAGCGCAATGCCCT  
GTTCTGTCAGCCACCTGCGGTCGTAGGTGAACAGGCTGTGCAGTAGCATCCGCCCGTCATCGGGCAGG  
ATGTCGTAGGAGCGTTTGAAGAACGTCAGATACCGCTCCTTTTTGAACGCGTCGAATGCCTCAAAGCT  
GACGATCCGGTCGACGTTCTCTTCAAAC TCTTCCCAGCCCTGCAGCCGGGCCTCGGCGCGCCGTTGCGT  
TCCGATTGCGGCCAGGCGGTCTTTGCTGCGTTCATAGTGATTCCGGCTGAGCGTGAGGCCGATGACATT  
GACGTCGTACTTCTCCACGGCCCCGAACGAGCGCCCCGCCCAACCCGCAACCCACGTCGAGTAGCGTCA  
TCCCCGGTTTCGAGGTTCACTTGTCCAACGCCAGATCCACCTTGGCCAGTTGCGCCTCTTCCAGCGTCA  
TATCGTCACGCTCGAAATAGGCGCAGGTGTAGACCCAGGTGGGATCGAGGAACAACGCGAAGAAGTC  
ATCCGAAATGTCGTAAGCCGACTGTGACTCTTCGTAATATGGTCTCAGCTTGGCCAT

Fig. 2. Sequence of *mmaA2* and *mmaA1* gene with an intergenic region of 166 base pair (shown in lower case. Location of forward A, sequence ID 1 and reverse primer D, sequence ID 2. Both primer sequences are underlined and italicized.



**Fig. 3.** PCR amplification of different mycobacterial genomic DNAs with primers A and D (lanes 1- 15): 1. *M.avium* 2. *M.bovis* 3. *M.chelonae* 4. *M.fortuitum* 5. *M.intracellulare* 6. *M.kansassi* 7. *M.phlei* 8. 100 bp DNA ladder 9. *M.marinum* 10. *M.scrofulaceum* 11. *M.smegmatis* 12. *M.szulgai*, 13. *M.tuberculosis* and 14. negative control. AD indicates 363 bp-amplified product.

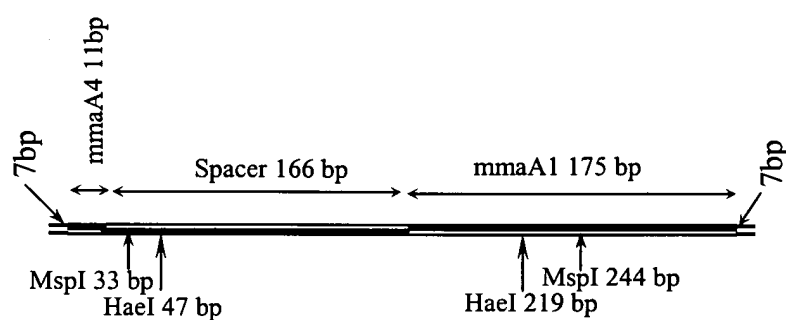


Fig. 4. Line diagram showing restriction endonuclease map of HaeI and MspI within AD.

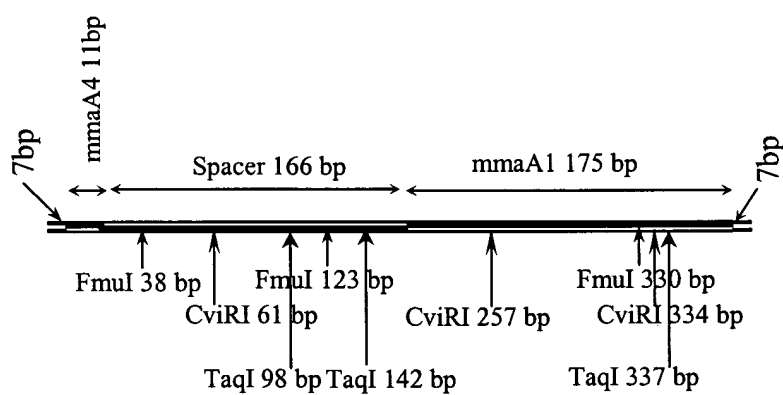


Fig. 5. Line diagram showing restriction endonuclease map of FmuI, CviRI and TaqI within AD.

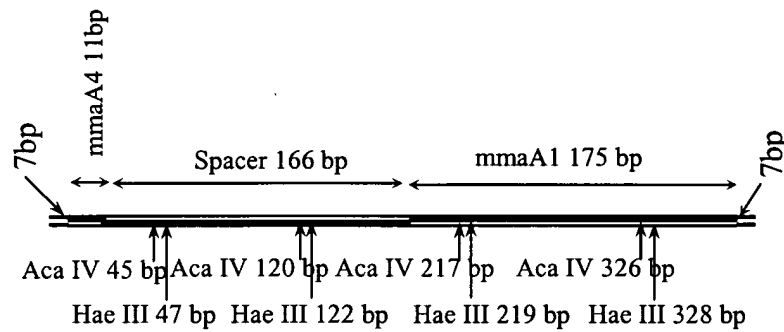


Fig. 6. Restriction map of AD showing distribution of the sites of restriction endonucleases AcaIV and HaeIII.

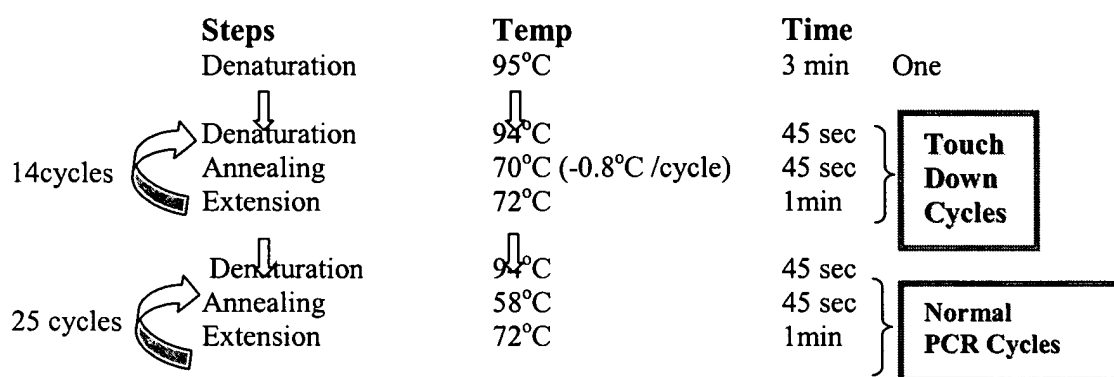


Fig. 7. Line diagram showing different steps of PCR reaction